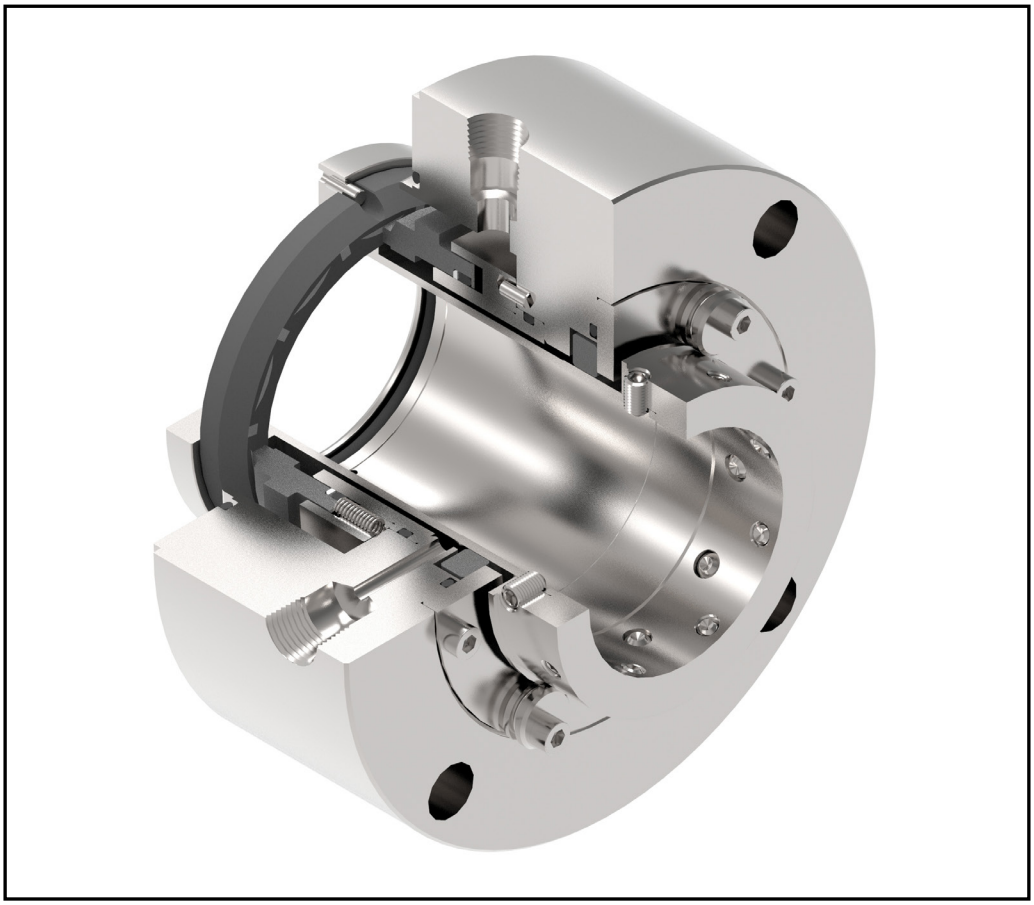
TYPE 48VXP

HIGH DUTY LIGHT HYDROCARBON PUSHER SEAL

Technical Specification



Product description

- Type 48VXP is a high duty light hydrocarbon pusher seal that is a unique part of the 48VRS standardised mechanical seal family.
- It incorporates John Crane's unique LaserFace® technology to enhance seal face lubrication, reduce seal face wear and control seal leakage. It is particularly suitable where the application is very close to the vapor pressure of the sealed product.
- General applications include light/ flashing hydrocarbons.
- The Type 48VXP is a set of standardised seal heads and mating rings intended primarily for application as cartridge seals in single or tandem arrangement. The seal heads are balanced, OD pressurised, O-ring pusher style seals.

Performance capabilities

- Temperatures: -40°C to 205°C (-40°F to 400°F)
- Pressures: Up to 84 barg (1218 psig)
- Speed: Up to 38 m/s (7480 fpm) for rotating seat arrangement. Up to 25 m/s (5000 fpm) for rotating head arrangement.

Design features

- It incorporates John Crane's unique LaserFace® technology to enhance seal face lubrication, reduce seal face wear and control seal leakage.
- Ear Drive - primary ring incorporates optimised ear drive design for increased drive torque capability.
- Balanced Design - balanced construction, including anti-extrusion ring, permits use in higher pressures.
- Premium Seal Face Materials - permits sealing of light hydrocarbon services at high operating pressures.
- O-Ring Design - permits accommodation of many different light hydrocarbons through use of a wide variety of materials.
- When rotating seat is selected a 'RS' will be added to the end of the seal type and displayed on the GA drawing as '48VXPRS'. If a rotating head is utilised, the seal type displayed on the GA drawing is the '48VXP'.
- The rotating seat (RS) design allows for reduced misalignment, enhanced cooling, distortion isolation from the gland and higher shaft speed capability using a stationary seal head and springs.

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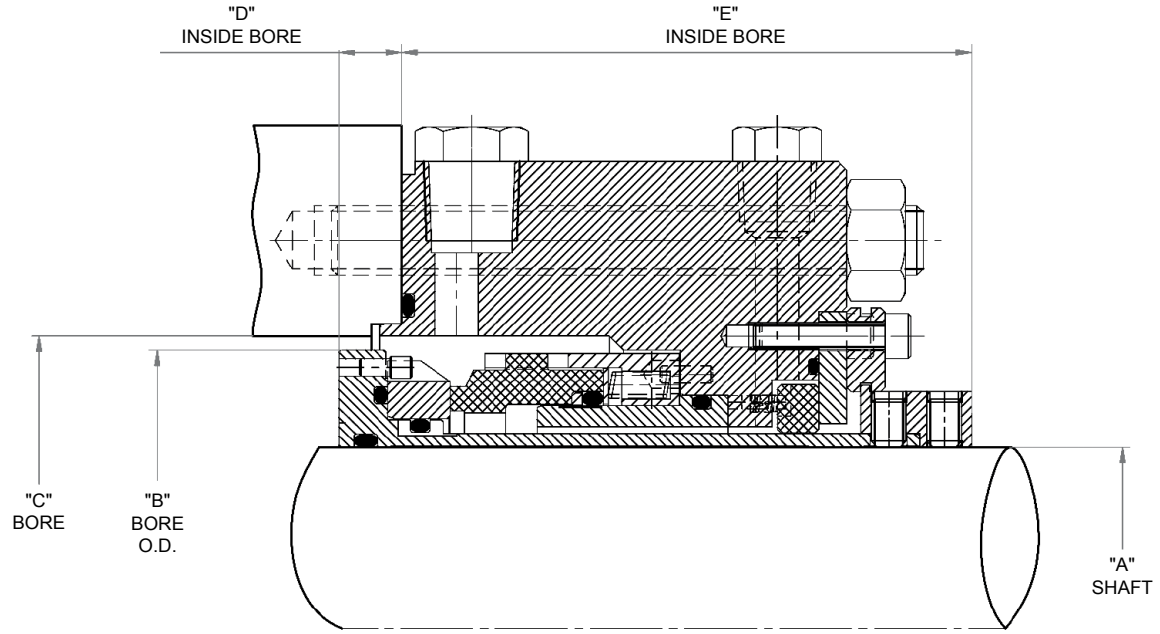
Type 48VXP typical arrangement



Type 48VXP dimensional data (mm)

Seal size (mm)	A	B	C	D	E
1.500	19.05	57.2	63.5	7.9	112.9
1.625	22.23	63.5	69.9	11.1	122.4
1.750	25.40	66.7	73.0	11.1	122.4
1.875	28.58	69.9	76.2	11.1	122.4
2.000	31.75	73.0	79.4	11.1	122.4
2.125	34.93	76.2	82.6	11.1	122.4
2.250	38.10	79.4	85.7	11.1	122.4
2.375	41.28	82.6	88.9	11.1	122.4
2.500	44.45	85.7	92.1	11.1	122.4
2.625	47.63	88.9	95.3	11.1	125.6
2.750	50.80	92.1	98.4	11.1	125.6
2.875	53.98	95.3	101.6	11.1	125.6
3.000	57.15	98.4	104.8	11.1	125.6
3.125	60.33	104.8	111.1	14.2	125.6
3.250	63.50	108.0	114.3	14.2	125.6
3.375	66.68	111.1	117.5	14.2	125.6
3.500	69.85	114.3	120.7	14.2	125.6
3.625	73.03	117.5	123.8	14.3	130.3
3.750	76.20	120.7	127.0	14.3	130.3

Seal size (mm)	A	B	C	D	E
3.875	79.38	123.8	130.2	14.3	130.3
4.000	82.55	127.0	133.4	14.3	130.3
4.125	85.73	130.2	136.5	14.3	130.3
4.250	88.90	133.4	139.7	14.3	130.3
4.375	92.08	136.5	142.9	14.3	130.3
4.500	95.25	139.7	146.1	14.3	131.8
4.625	98.43	144.4	150.8	17.4	131.9
4.750	101.60	147.6	154.0	17.4	131.9
4.875	104.78	150.8	157.1	17.4	131.9
5.000	107.95	154.0	160.3	17.4	133.9
5.125	111.13	157.1	163.5	17.4	133.9
5.250	114.30	160.3	166.7	17.3	141.9
5.375	117.48	163.5	169.8	17.3	141.9
5.500	120.65	166.7	173.0	17.3	141.9
5.625	123.83	169.8	176.2	17.3	141.9
5.750	127.00	173.0	179.4	17.3	141.9
5.875	130.18	176.2	182.5	17.3	141.9
6.000	133.35	179.4	185.7	17.3	145.1

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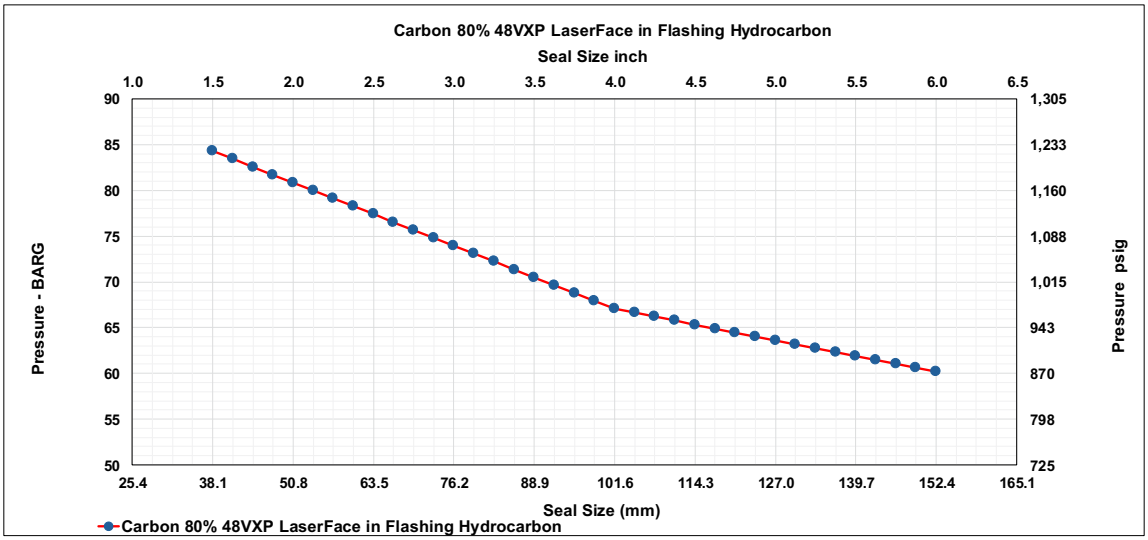
Type 48VXP dimensional data (inches)

Seal size (inches)	A	B	C	D	E
1.500	0.750	2.252	2.500	0.311	4.445
1.625	0.875	2.500	2.752	0.437	4.819
1.750	1.000	2.626	2.874	0.437	4.819
1.875	1.125	2.752	3.000	0.437	4.819
2.000	1.250	2.874	3.126	0.437	4.819
2.125	1.375	3.000	3.252	0.437	4.819
2.250	1.500	3.126	3.374	0.437	4.819
2.375	1.625	3.252	3.500	0.437	4.819
2.500	1.750	3.374	3.626	0.437	4.819
2.625	1.875	3.500	3.752	0.437	4.945
2.750	2.000	3.626	3.874	0.437	4.945
2.875	2.125	3.752	4.000	0.437	4.945
3.000	2.250	3.874	4.126	0.437	4.945
3.125	2.375	4.126	4.374	0.559	4.945
3.250	2.500	4.252	4.500	0.559	4.945
3.375	2.625	4.374	4.626	0.559	4.945
3.500	2.750	4.500	4.752	0.559	4.945
3.625	2.875	4.626	4.874	0.563	5.130
3.750	3.000	4.752	5.000	0.563	5.130

Seal size (inches)	A	B	C	D	E
3.875	3.125	4.874	5.126	0.563	5.130
4.000	3.250	5.000	5.252	0.563	5.130
4.125	3.375	5.126	5.374	0.563	5.130
4.250	3.500	5.252	5.500	0.563	5.130
4.375	3.625	5.374	5.626	0.563	5.130
4.500	3.750	5.500	5.752	0.563	5.189
4.625	3.875	5.685	5.937	0.685	5.193
4.750	4.000	5.811	6.063	0.685	5.193
4.875	4.125	5.937	6.185	0.685	5.193
5.000	4.250	6.063	6.311	0.685	5.272
5.125	4.375	6.185	6.437	0.685	5.272
5.250	4.500	6.311	6.563	0.681	5.587
5.375	4.625	6.437	6.685	0.681	5.587
5.500	4.750	6.563	6.811	0.681	5.587
5.625	4.875	6.685	6.937	0.681	5.587
5.750	5.000	6.811	7.063	0.681	5.587
5.875	5.125	6.937	7.185	0.681	5.587
6.000	5.250	7.063	7.311	0.681	5.713

Basic pressure rating

The dynamic sealing pressure rating for the 48VXP Size range with carbon face primary rings and the LaserFace® grooved mating ring up to 3600 rpm. Some larger carbon seal sizes have a slightly lower pressure limit. Please contact JOHN CRANE for shaft speeds above 3600 rpm.



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Materials of construction

Seal Components	Materials	
Description	**Standard**	**Options**
Primary Ring	Antimony Carbon	-
Mating Ring	Sintered Silicon Carbide	Tungsten Carbide
Spring	Alloy C-276	-
Seal Adaptive Hardware	316 S.S.	Alloy 20 Cb-3 Alloy C-276 Hastelloy Alloy 400 Duplex S.S.
Anti-x-ring	Carbon-Filled PTFE	Carbon Fiber-Filled PEEK
O-Ring	Fluoroelastomer	TFE Propylene Ethylene Propylene Neoprene Nitrile Perfluoroelastomer

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United Kingdom
Tel: 44-1753-224002

Latin America
Brazil
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Middle East & Africa
United Arab Emirates
Tel: 971-481-27800

Asia Pacific
Singapore
Tel: 65-6518-1800